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10/557,538	12/22/2006	Egidio Berwanger	033794/303473	2146
826	7590	12/22/2010	EXAMINER	
ALSTON & BIRD LLP			WEINSTEIN, LEONARD J	
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CHARLOTTE, NC 28280-4000			PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/557,538

Applicant(s)

BERWANGER, EGIDIO

Examiner

LEONARD J. WEINSTEIN

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-040)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment of October 11, 2010. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.
2. The examiner acknowledges the amendments to claims 1, 6, 9, 10, 12, and 17.

Claim Objections

3. Claim 2 is objected to because of the following informalities: the wording in the claim is unclear. In view of the applicant's explanation of claim 2, the examiner suggests a minor modification to the limitations including:

- “a weight (2a) connected to a first insulating element (20') and a second insulating element (20''), the first and second acceleration transducers (4a, 4b), and signal terminal (33) and feed terminal (34) projecting from the fir” and second acceleration transducers (4a, 4b)”

are amended to recite:

- --- a weight (2a) connected to ~~a first insulating element (20') and a second insulating element (20'')~~, the first and second acceleration transducers (4a, 4b), ~~and the~~ signal terminal (33) and ~~the~~ feed terminal (34) projecting from the first and second acceleration transducers (4a, 4b), and a first insulation element (20') and a second insulating element (20'') ---

Amendment of Oct. 11, 2010 (“Amendment”), pg. 8. The suggested language more clearly conveys that all the elements following “weigh (2a)” are connected to it.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claims 5 and 14** are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an arrangement where the weight, the first transducer, the second transducer, and the second insulating member are all disposed on the first insulating element, does not reasonably provide enablement for an arrangement where the first transducer, second transducer, and the second insulating member overlap the first insulating member. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to build the invention commensurate in scope with these claims. Figure 2 per the Amendment, clearly shows that a weight 2a, the second insulting member 20", the first transducer 4a, and second transducer 4b are located on the first insulating member 20'. There is no overlapping with the first insulating member except for the spatial relationship between the edge of the first insulating member and the edges of the weight and the transducers. However the limitations as claimed do not make a clear reference to any of these portions of the claimed elements. The examiner also notes that the only place where the term "overlapping" appears in the instant disclosure is in claims 5 and 14. As best understood by the examiner the limitations including:

- "the first and second acceleration transducers (4a, 4b), the second insulating element (20") and the weight (2a) are positioned overlapping the first insulating element (20)"

will be considered to be:

- --- the first and second acceleration transducers (4a, 4b), the second insulating element (20") and the weight (2a) are positioned ~~overlapping~~ on the first insulating element (20) ---

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 6 recites the limitation "the housing (50)" in line 3. There is insufficient antecedent basis for this limitation in the claim. As best understood by the examiner the limitations will be considered as --- the hermetic housing (50) ---.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
10. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Etter WO 02/33260 ("Etter") as evidenced by Itameri-Kinter et al. US 4,984,973 ("Itameri-Kinter") in view of Schmid 5,117,696 ("Schmid '696").

a. With respect to **Claim 1** –

i. **Etter** – With reference to the unofficial translation of Etter as provided through www.easpacenet.com and attached here with, Etter teaches all the limitations as claimed including:

[claim 1] a sensor assembly 20 for measuring movements of a pump 10 including: the fluid pump (10) being driven by an electric motor (14) and the electric motor (14) being connectable to a feed voltage (via terminal box 48), the sensor assembly (20, 22, 26) comprising an accelerometer (20) and being characterized in that the accelerometer (20) is electrically associated to a bias circuit (18), wherein the accelerometer 20 is electrically connectable (via 18 and 48) to the feed voltage of the motor (14) and an external measuring circuit (52), wherein a sensor assembly (20, 22, 26) is mounted in an internal position of a hermetic housing (48) the housing for the terminal is hermetically sealed in addition to the housing 16 being hermetically sealed); See Etter WO 02/33260 Unofficial Translation ("Translation"),

<http://epo.worldlingo.com/wl/epo/epo.html?ACTION=description->

[retrieval&OPS=ops.epo.org&LOCALE=en EP&FORMAT=docdb&COUNT
RY=WO&NUMBER=0233260&KIND=A1&T=1](#), (June 8, 2010) ("The vibration sensor 20 is as piezoelectrically working acceleration adaptor formed and 16 connected in the range of the terminal box 48 fixed with the compressor stator. In principle also the cylinder head is 36 suitable good as measuring point.").

ii. **Itameri-Kinter** – It is noted that the translation does not say whether the sensor 20 would be placed inside or outside of the cylinder head. The examiner also notes that it was known in the art for terminal boxes to be hermetically sealed as evidenced by Itameri-Kinter (Itameri-Kinter –abstract; figures 1 and 2) and is therefore consistent with the conclusion that the terminal box 48 of the Etter is hermetically sealed. Further it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70. The terminal box 48 could be moved inside of the housing 16 or the housing could be made to be larger so that the terminal box (although in its own casing) would be located inside the housing where the compressor stator was located. This would amount to a rearrangement of parts without a change in function. Further Itameri-Kinter teaches it was known in the art at the time of the invention to put terminal boxes inside of hermetic compressor housings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a terminal box inside a hermetic

housing where a stator is disposed in order to provide a circuit for a sensor assembly for a compressor.

iii. **Schmid '696** – Etter does not explicitly detail how an accelerometer is connected to the control 18 and microprocessor 52 within terminal box 48. Therefore Etter does not explicitly teach the limitations for an accelerometer suitable for vibration monitoring that are taught Schmid '696 including: **[claims 1]** first and second acceleration transducers (2; Schmid – col. 3 ll. 46-50), a feed terminal (9) and a signal terminal (output of cross connected electrodes; "Schmid – output"; Schmid col. 3 ll. 10-13), the feed terminal (9) being electrically connectable to the feed voltage (not shown), and the signal terminal (Schmid – output) being electrically connectable to an external measuring circuit (Schmid – col. 3 ll. 36-39)

iv. **Standard for Combining Known Elements** - Where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ2d 1509, 1518-19 (BPAI, 2007) (*citing KSR v. Teleflex*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as

obvious under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396.

v. **Combination of Etter and Schmid** – Etter teaches a compressor that uses an accelerometer to monitor the vibrations experienced by a compressor during operation and modify a signal to a motor driving the compressor. Etter teaches a non-specific type of accelerometer whereas Schmid teaches a compact biaxial accelerometer that detects accelerations in two directions (Schmid – col. 3 ll. 10-15). The accelerometer of Schmid is an improvement over the accelerometer of Etter and was known in the art at the time the invention was made. Providing the accelerometer of Schmid to the compressor of Etter would result in the predictable result of a controller that receives signals representing the vibrations experience by the compressor during normal operation. Therefore the limitations claim a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields a predictable result.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the a compressor that monitors vibrations to control operation, as taught by Etter, with a biaxial accelerometer, as taught by Schmid, since the modification amounts to the predictable use of prior art elements according to their established

functions resulting in the simple substitution of one known element for another.

- b. With respect to claims depending from **claim 1** –
 - i. With respect to **claims 2-5** – Schmid teaches the limitations including:

[claim 2]

A weight (5) connected to the first and second acceleration transducers (Schmid – col. 44-50), the signal terminal (Schmid-output) and the feed terminal (9) projecting from the first and second acceleration transducers (Schmid – col. 44-50), and a first insulating element (4 - bottom) and a second insulating element (4 - top);

[claim 3]

At least one support means (1) comprising a base portion (1), the base portion (1) being capable of being fixed to a fluid pump (Schmid – col. 1 ll. 57-58);

[claim 4]

Wherein the second insulating element (4-bottom) is positioned on the surface (3a) of the support (3);

[claim 5]

Wherein the weight 5, first and second acceleration transducers (Schmid – col. 1 ll. 57-58) and the second insulating element (4-bottom) are positioned on the first insulating element (4-top).

- ii. With respect to **claims 6-8** – Etter teaches the limitations including:
[claim 6]

Wherein a bias circuit (18) associated to the accelerometer (20), is mounted in an internal portion (48) of the hermetic housing (48 per Itameri-Kinter this would be a hermetically sealed housing; note the claim does not require the housing to be include the portion of a pump housing that includes a stator only that it be a housing of the pump per claim 1) and connected to the measuring circuit (52);

[claim 7]

Wherein a bias circuit (18) comprises a transistor (as element 18 is control device which are known to have transistors that are connected to control devices that direct power and monitor or transfer signals from sensing devices) operatively associated to the a signal terminal (as would be defined by the terminal connection made between element 52 and element 20 through element 18 such that element 52 could process said signals and determine an operating characteristic to be implemented) and to a terminal (not shown but understood that element 20 receives power through a connection between element 18 and power source);

[claim 8]

Wherein an external measuring circuit (52) comprises a microprocessor (52; see the translation), the microprocessor (52) measuring the signal of the sensor assembly (20) by means of the signal terminal (as discussed above).

iii. A combination between Etter and Schmid would teach the limitations as discussed because the limitations of claims 2-5 are directed toward specific elements included in the accelerometer of Schmid which would be incorporated when substituted for the accelerometer of Etter. With respect to claims 6-8, the limitations are directed toward elements of a pump that interact with an accelerometer and which are taught by Etter and would interact with the accelerometer of Schmid in order to operate the pump.

11. Claims 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Etter in view of Schmid.

a. With respect to **Claim 9**

i. **Etter** – With reference to the unofficial translation of Etter as provided through www.easpace.net and attached here with, Etter teaches all the limitations as claimed including:

[claim 9]

A cylinder (28), a piston (13), and a housing (16) comprising a hermetic terminal (as defined by connections provided through a wall of element 16

from element 48 being part of element 16 that is mounted in a top section of element 16) and hermetically enclosing the cylinder (28) and the piston (13), forming a hermetic assembly (10), the piston (13) being driven by an electric motor (14), the electric motor (14) being connected to an electric voltage (via 48) by means of a pair of voltage terminals (via element 48) associated to the hermetic terminal (48), the fluid pump (10) being characterized by comprising a sensor assembly (1) associated to the cylinder (58); and wherein sensor assembly (1) comprising a bias circuit (18) associated to the accelerometer (20), the bias circuit (18) is mounted in an internal portion (48)¹. See Translation ("The vibration sensor 20 is as piezoelectrically working acceleration adaptor formed and 16 connected in the range of the terminal box 48 fixed with the compressor stator. In principle also the cylinder head is 36 suitable good as measuring point.").

ii. **Schmid '696** – Etter does not explicitly detail how an accelerometer is connected to the control 18 and microprocessor 52 within terminal box 48. Therefore Etter does not explicitly teach the limitations for an accelerometer suitable for vibration monitoring that are taught Schmid '696 including: **[claim 9]** first and second acceleration transducers

¹ The examiner notes that the limitations "wherein sensor assembly comprising a bias circuit associated to the accelerometer, the bias circuit is mounted in an internal portion" were not asserted as being addressed by Etter in section 10.a.i of the Office Action of June 6, 2010 ("Office Action"). However in section 10.b.ii of the office action claim 6 was shown as being taught by Etter. The limitations of claim 6 include are the same as the limitations of the final paragraph of claim 9. Therefore since Etter was relied on for all of the limitations of claim 1 that are also part of claim 9, the other limitations of claim 9 as listed on page 8 of the Office Action (also part of section 10.a.i), and the limitations of claim 6 which are the same limitations recited in final paragraph of claim 9, section 11.a.i of this action does not set forth a new grounds of rejection as to claim 9.

(2; Schmid – col. 3 ll. 46-50), a feed terminal (9) and a signal terminal (output of cross connected electrodes; “Schmid – output”; Schmid col. 3 ll. 10-13), the feed terminal (9) being electrically connectable to the feed voltage (not shown), and the signal terminal (Schmid – output) being electrically connectable to an external measuring circuit (Schmid – col. 3 ll. 36-39)

- iii. **Standard for Combining Known Elements** - Where a claimed improvement on a device or apparatus is no more than “the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement,” the claim is unpatentable under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing *KSR v. Teleflex*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing *KSR*, 127 S.Ct. at 1740, 82 USPQ2d at 1396.
- iv. **Combination of Etter and Schmid** – Etter teaches a compressor that uses an accelerometer to monitor the vibrations experienced by a compressor during operation and modify a signal to a motor driving the compressor. Etter teaches a non-specific type of accelerometer whereas Schmid teaches a compact biaxial accelerometer that detects

accelerations in two directions (Schmid – col. 3 ll. 10-15). The accelerometer of Schmid is an improvement over the accelerometer of Etter and was known in the art at the time the invention was made. Providing the accelerometer of Schmid to the compressor of Etter would result in the predictable result of a controller that receives signals representing the vibrations experience by the compressor during normal operation. Therefore the limitations claim a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields a predictable result.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the a compressor that monitors vibrations to control operation, as taught by Etter, with a biaxial accelerometer, as taught by Schmid, since the modification amounts to the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another.

- b. With respect to claims depending from **claim 9** -
 - i. With respect to **claims 10, 11, 15, and 16** – Etter teaches the limitations including:

[claim 10]

A sensor assembly (20) that is an accelerometer (20) associated to a support means (surface of element 16 defining a partition between inner section of element 16 around element 14 and an inner section of element 48; "16-separating surface"), the support means ("16-separating surface") being fixed to the hermetic assembly (16);

[claim 11]

Wherein a sensor assembly (20) comprises a base portion (face of element 20 mounted to element 16-separating surface; "20-bottom face"), the base portion (20-bottom face) being fixedly associable to the hermetic assembly (16).

[claim 15]

Wherein a bias circuit (18) comprises a transistor (as element 18 is control device which are known to have transistors that are connected to control devices that direct power and monitor or transfer signals from sensing devices) operatively associated to the a signal terminal (as would be defined by the terminal connection made between element 52 and element 20 through element 18 such that element 52 could process said signals and determine an operating characteristic to be implemented) and to a terminal (not shown but understood that element 20 receives power through a connection between element 18 and power source);

[claim 16]

Wherein an external measuring circuit (52) comprises a microprocessor (52; see the translation), the microprocessor (52) measuring the signal of the sensor assembly (20) by means of the signal terminal (as discussed above).

ii. With respect to **claims 12-14** –

- (1) Schmid teaches the limitations including:

[claim 12]

A weight (5) connected to the first and second acceleration transducers (Schmid – col. 44-50), the signal terminal (Schmid-output) and the feed terminal (9) projecting from the first and second acceleration transducers (Schmid – col. 44-50), and a first insulating element (4 - bottom) and a second insulating element (4 - top);

[claim 13]

Wherein the second insulating element (4-bottom) is positioned on the surface (3a) of the support (3);

[claim 14]

Wherein the weight 5, first and second acceleration transducers (Schmid – col. 1 ll. 57-58) and the second insulating element (4-bottom) are positioned on the first insulating element (4-top).

(2) A combination between Etter and Schmid would teach the limitations as discussed because the limitations of claims 12-14 are directed toward specific elements included in the accelerometer of Schmid which would be incorporated when substituted for the accelerometer of Etter. With respect to claims 10, 11, 15, and 16, the limitations are directed toward elements of a pump that interact with an accelerometer taught by Etter and would interact with the accelerometer of Schmid in order to operate the pump.

- c. With respect to **claim 17** –Etter teaches a terminal box 48 mounted in upper section of element 16 with a separating wall between the inner section of element 16 where element 14 is disposed and an inner section of element 48 where sensor 20 is housed. There are connection wires that go through the partition and connect to various sensors therefore Etter teaches the limitations a housing 16 with a hermetic terminal (as defined by connections provided through a wall of element 16 from element 48 being part of element 16 that is mounted in a top section of element 16) for passage of feed and signal terminals not shown.
- d. With respect to **Claims 18** - a combination of the references would teach the limitations of a cooler (refrigerant compressor of Etter) including the sensor assembly (sensor 7 of Schmid) as discussed above in section of this section.

Response to Arguments

12. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

13. With respect to claim 9 the applicant argues that the control device of Etter is not a bias circuit and further argues that the control device is located with a terminal box which is not an internal position of the hermetic housing of a fluid pump.

a. **Response:** With respect to applicant's first argument that the control device of Etter cannot be considered a bias circuit the examiner notes that Etter discloses that "the control device, which addresses 20 [vibration sensor] with exceeding of an empirical upper threshold of the output signal of the vibration sensor determined in regular operation." The Translation, pg. 2. Thus the control device at least reads the signal output of the sensor 20 and then performs a subsequent function. The control device would provide for the manipulation of the output signal which could include an intermediate amplification of the signal before command is provide in response to that signal. The examiner further notes that the claims recite "a bias circuit associated to an accelerometer." the inclusion of the "associated to" is board and does not limit or provide for a definite functional step which would be performed by the bias circuit as it relates to the accelerometer and vice versa.

b. **Response:** With respect to the location of the of the control device within the terminal box does not preclude Etter from reading on the limitations as claimed since a housing can be comprised of an assembly of parts and the housing of Etter can be considered as to include both the main body section defined by elements 16 and a subsection defined by element 48 which is a

terminal box mounted to the body 16. Thus and internal portion of element 48 is an internal portion of the housing generally comprised of elements 16 and 48.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD J. WEINSTEIN whose telephone number is (571)272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/

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Supervisory Patent Examiner, Art
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/Leonard J Weinstein/
Examiner, Art Unit 3746